

**Nevada Division of Environmental Protection  
Chemical Accident Prevention Program  
Element Audit Checklist**



<b>Facility:</b>	<b>Process(es) Covered:</b>	<b>Date:</b>	
<b>III. PROCESS HAZARD ANALYSIS (PHA)</b>			
<b>A. RECORDS AUDIT/REVIEW</b>			
<b>1) EXISTENCE, COMPLETENESS OF PHA</b>		<b>NAC Ref.</b>	<b>Resp. Code</b>
Does the PHA appear to be complete for the covered process (i.e. sections 2 through 9 satisfied)?		459.95414	
Notes/Comments Pertaining to Responses to Questions under Issue 1):			
<b>2) INFORMATION PERTAINING TO PHA TIMING</b>		<b>NAC Ref.</b>	<b>Resp. Code</b>
i. Was the PHA completed before introducing HHS or explosives into the process?		459.95414(1)	
ii. Was the relevant Process Safety Information compiled and verified prior to conducting the PHA? <i>refer to PSI compilation checklist on the data form</i>		459.95412(1)	
Notes/Comments Pertaining to Responses to Questions under Issue 2):			
<b>3) INFORMATION PERTAINING TO PHA METHODOLOGY</b>		<b>NAC Ref.</b>	<b>Resp. Code</b>
i. Was the PHA methodology approved by CAPP staff prior to proceeding, and was that methodology used by the facility?		459.95414(3)	
ii. Was the PHA methodology selected from the options provided in regulation?		459.95414(4)	
Notes/Comments Pertaining to Responses to Questions under Issue 3):			



4) INFORMATION PERTAINING TO PHA PERFORMANCE	NAC Ref.	Resp.
i. Has a list of previous accidents and near-misses been developed for consideration by the PHA team?	459.95414(5b)	
ii. Have previous accidents and near-misses been considered by the team when conducting the PHA?	459.95414(5b)	
iii. Have all portions of the regulated process been included in the PHA?	459.95414(1)	
iv. Have any utilities or auxiliary processes, that could potentially cause an accidental release, fire or explosion in the regulated process, been included in the PHA?	459.95414(5a)	
v. Do potential hazards appear to have been identified?	459.95414(5a)	
vi. Does Consequence of Hazard reflect failure of Engineering and Administrative Controls, OR, if consequence of hazard does not reflect complete failure of Engineering and Administrative Controls, have those controls that were assumed to be functional been thoroughly evaluated to ensure they are adequately designed and maintained?	459.95414(5d)	
vii. Is Consequence of Hazard brought to completion and does it reflect Safety and Health effects when those effects are possible?	459.95414(5g)	
viii. Has impact of functioning Engineering and Administrative Controls been considered when defining the likelihood of the identified hazard resulting in the defined consequence?	459.95414(5c)	
ix. Has impact of failed Engineering and Administrative Controls been considered when defining the Severity of the Consequence of the identified Hazards?	459.95414(5d)	
x. Have Facility Siting issues been thoroughly addressed as part of the defined PHA method, or as a separate study (such as a siting checklist)?	459.95414(5e) 459.95414(6b)	
xi. Have Human Factors been thoroughly addressed as part of the defined PHA method, or as a separate study (such as a human factors checklist)?	459.95414(5f) 459.95414(6a)	
xii. Have External Forces been thoroughly addressed as part of the defined PHA method, or as a separate study and include consideration of the external forces listed under 1 through 8 below?	459.95414(6c)	
1. Earthquake. Does structural design meet the appropriate seismic design criteria? Are pipelines, supports and equipment properly anchored or guided to withstand earthquakes?	459.95414(6c)	
2. High Winds. Is the process and associated buildings properly designed to withstand wind loads?	459.95414(6c)	
3. Lightning and Static Electricity. Is the process adequately grounded from lightning strikes and adequately grounded or bonded to prevent sparking or arcing?	459.95414(6c)	
4. Fire or Explosion in Adjacent Equipment or Facilities. Have the impacts of fire and explosion in an adjacent facility been evaluated and are there adequate safeguards and response procedures in place to address these occurrences?	459.95414(6c)	
5. Loss of Utilities including electricity, process and fire water, instrument air, steam and nitrogen. This evaluation should focus on loss of the utility to the whole process or some part of the process, rather than loss to an individual piece of equipment or an instrument. Has utility loss been evaluated, and have the hazards posed by utility loss been adequately mitigated?	459.95414(6c)	
6. Release of a Hazardous Material in an adjacent piece of equipment or an adjacent facility. Have the impacts of a hazardous material release in an adjacent piece of equipment or facility been evaluated and are there adequate response procedures in place to address these occurrences? If the process area must be evacuated quickly, can the process be left unmanned or automatically shutdown?	459.95414(6c)	



7. Vehicular or Rail Car Impact on equipment or instruments in the process. Has the potential for impact been evaluated and is there adequate mitigation in place?	459.95414(6c)	
8. Breakdown of Facility Security or inadequate facility security. Has the adequacy of facility security been evaluated, and is there adequate security in place?	459.95414(6c)	
xiii. Has a safer alternative process, that yields the same results as the existing process, been identified and considered for the current plant location?	459.95414(5a)	
xiv. Has substitution with a less hazardous substance been considered where substitution is possible?	459.95414(5a)	
<b>Notes/Comments Pertaining to Responses to Questions under Issue 4):</b>		
<b>5) INFORMATION PERTAINING TO THE TEAM CONDUCTING THE PHA</b>	<b>NAC Ref.</b>	<b>Resp. Code</b>
<p>Did the team conducting the PHA have a members with:</p> <ol style="list-style-type: none"> <li>1. Expertise in engineering and process operations,</li> <li>2. Knowledge specific to the process being evaluated, and</li> <li>3. Knowledge in the specific PHA methodology being employed?</li> </ol> <p><i>Refer to the data form</i></p>	459.95414(7)	
<b>Notes/Comments Pertaining to Responses to Questions under Issue 5):</b>		
<b>6) INFORMATION PERTAINING TO PHA RECOMMENDATIONS AND THE PLAN TO ABATE HAZARDS</b>	<b>NAC Ref.</b>	<b>Resp. Code</b>
i. Has the owner or operator promptly evaluated the PHA recommendations and determined a course of action?	459.95414(8a) 459.95414(8b)	
ii. If a decision has been made to not address a proposed Recommendation, is the reason justified and documented?	459.95414(8b)	
iii. Is the resolution of each Recommendation scheduled?	459.95414(8c)	
iv. Do the Recommendations appear to be scheduled for completion as soon as possible?	459.95414(8d)	
v. Is completion of the Recommendations being documented?	459.95414(8d)	



**Notes/Comments Pertaining to Responses to Questions under Issue 6):**

<b>7) EMPLOYEE PARTICIPATION AND PHA RECOMMENDATION IMPLEMENTATION</b>	<b>NAC Ref.</b>	<b>Resp. Code</b>
i. Are the PHA Recommendations being completed as scheduled? <i>refer to part B</i>	459.95414(8d)	
ii. Are PHA Recommendations being shared with all potentially affected employees? <i>refer to part B</i>	459.95414(8e)	
iii. Does the onsite PHA Recommendation documentation include the recommendations noted on the annual registration? <i>refer to part B</i>	459.95348(6c)	

**Notes/Comments Pertaining to Responses to Questions under Issue 6):**

<b>8) INFORMATION PERTAINING TO PHA REVALIDATION</b>	<b>NAC Ref.</b>	<b>Resp. Code</b>
i. For a new PHA that is intended to serve as a Revalidation, does the PHA comply with sections 1 through 7 above? (If a new PHA was not performed for revalidation, mark NA for this item.)	459.9549(2)	
ii. If an existing PHA was revalidated, was the revalidated PHA brought into compliance with sections 1 through 7 above? (If an existing PHA was not revalidated, mark NA for this item.)	459.9549(1)	
iii. Does the Revalidation reflect current Process Safety Information & offsite consequence analysis? (There must be documentation indicating how the accuracy was validated)	459.95496	
iv. Does the Revalidation reflect current Standard Operating Procedures? (There must be documentation indicating how the accuracy was validated)	459.95498	
v. Does the Revalidation reflect the current Training Program? (There must be documentation indicating how the accuracy was validated)	459.95498	
vi. Does the Revalidation reflect the current Maintenance Program? (There must be documentation indicating how the accuracy was validated)	459.95498	
vii. Does the Revalidation reflect the current Emergency Response Program? (There must be documentation indicating how the accuracy was validated)	459.95498	
viii. Does the Revalidation consider incidents that occurred after the prior PHA?	459.955(1)	



ix.	Has Revalidation team ensured that all recommendations from Incident Investigations have been implemented or are scheduled to be completed as soon as possible?	459.955(2)	
x.	If deficient program elements were the cause of the incidents, have those deficiencies been corrected?	459.955(3)	
<b>Notes/Comments Pertaining to Responses to Questions under Issue 7):</b>          			
<b>9) IMPLEMENTATION PLAN AND DOCUMENT CONTROL</b>		<b>NAC Ref.</b>	<b>Resp. Code</b>
i.	Is there a site-specific plan that addresses how the PHA requirements will be developed and maintained?	459.95516(2)	
ii.	Is there a site-specific policy or procedure that addresses how PHA documentation is controlled to ensure that the most current information is in circulation and use?	459.95516(2)	
<b>Notes/Comments Pertaining to Responses to Questions under Issue 8):</b>          			
<b>General Records Audit/Review Notes/Comments:</b>          			



<b>B. ON-SITE INSPECTION</b>	
<b>1) VERIFY THAT PHA IS ONSITE, ACCESSIBLE TO EMPLOYEES AND THAT RECOMMENDATIONS ARE BEING IMPLEMENTED</b>	<b>Resp. Code</b>
a. Is the PHA on site and available to employees?	
b. Is there documented evidence that PHA recommendations and subsequent actions are being shared with operating, maintenance or other affected employees?	
c. Are PHA recommendations being completed as scheduled? (Note below if the recommendation sheet used for this verification is attached)	
d. Does the onsite documentation for PHA recommendations include those items submitted with the annual registration?	
<b>Notes/Comments Pertaining to Responses to Questions under Issue 1):</b>	
<b>General On-Site Inspection Notes/Comments:</b>	



### C. INTERVIEWS

- 1) **SELECT TWO OR MORE OPERATING PERSONNEL TO INTERVIEW REGARDING THE EFFECTIVENESS OF SOP'S USING THE FOLLOWING QUESTION SETS.**  
 (RESPONSES ARE TO BE LOGGED ON FOLLOWING PAGES.)

Question Set	Question Options/Phrasing
<b>a</b>	What is your job description and associated tasks?
<b>b</b>	Did you participate in the PHA sessions?
<b>c</b>	Were you provided an opportunity to comment on the PHA?
<b>d</b>	Was the PHA used in any of your training sessions?
<b>e</b>	How were the PHA study and recommendations presented to you?

- 2) **RECORD RESPONSES OF SELECTED OPERATING OR MAINTENANCE PERSONNEL TO QUESTIONS FROM THE QUESTION SETS (LISTED UNDER ITEM NO. 1)**

#### Employee Profile

Job Title/Position	Department/Unit/Group	Yrs in Job	Yrs w/Co.

**Response to Question Set \_:**

**Response to Question Set \_:**



**Response to Question Set \_:**

**Response to Question Set \_:**

**Response to Question Set \_:**